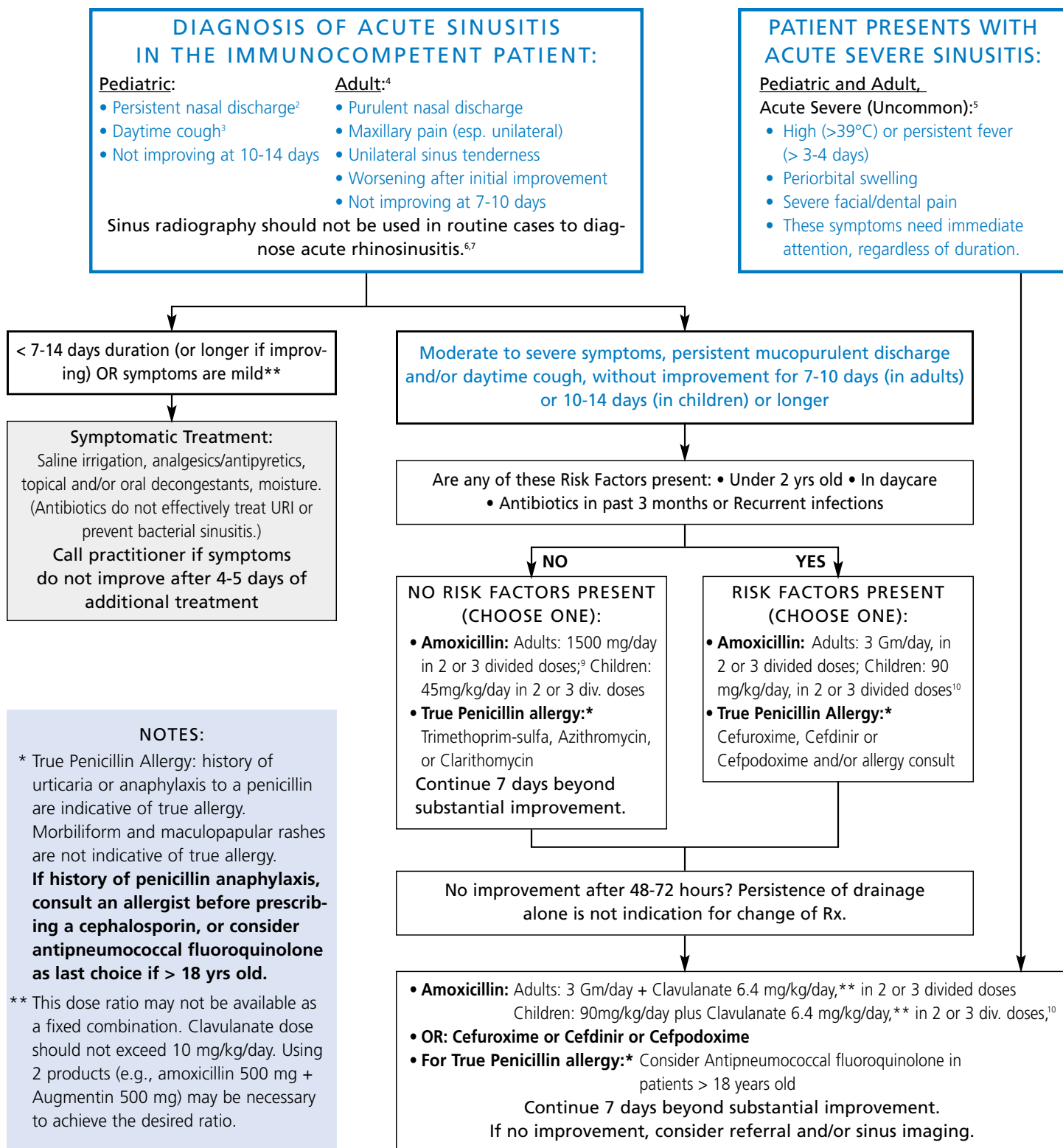


Practice Guidance for JUDICIOUS USE OF ANTIBIOTICS

ACUTE UNCOMPLICATED SINUSITIS

"Approximately 2/3 of sinus infections resolve without antibiotics."^{1,19}



WHEN BACTERIAL INFECTION IS PRESENT

<i>Streptococcus pneumoniae</i>	30-66%
<i>Hemophilus influenzae</i>	20%
<i>Moraxella catarrhalis</i>	10%

KEY POINTS

- Three meta-analyses have shown that newer and broad-spectrum antibiotics are not significantly better than narrow-spectrum agents.⁹
- However recent emergence of resistant bacteria must be kept in mind.⁴
- Most viral rhinosinusitis is well or nearly well at 7-10 days; about 25% are still symptomatic at 14 days.⁸
- Color and type of nasal discharge do not predict bacterial infection.¹¹
- Bacterial infection is uncommon when symptom duration is less than seven days, unless patient is acutely ill.
- Imaging should be considered only when sinusitis is recurrent, complications are suspected, diagnosis is unclear, or surgery is being considered.

PREVENTION:⁸

- Vaccination:
 - All newborns and children < 2 yrs should receive Prevnar.^{9,10}
 - Children with recurrent infections should receive
 - Influenza vaccine if > 6 mo
 - 23-valent Pneumococcal vaccine if > 2 yrs¹¹
- Cigarette smoke avoidance/cessation
- Consider allergen and irritant avoidance

References:

1. Wald E, Chiponis D, Ledesma-Medina J. Comparative effectiveness of amoxicillin and amoxicillin-clavulante potassium in acute paranasal sinus infections in children: a double-blind, placebo-controlled trial. *Pediatrics* 1986;77:795-800.
2. Wald E, Milmo G, Bowen A, et al. Acute maxillary sinusitis in children. *NEJM* 1981;304:749-754.
3. Wald E. Purulent nasal discharge. *Pediatr Infect Dis J* 1991;10:329-333.
4. O'Brien KL, Dowell SF, Schwartz B, et al. Acute sinusitis—principles of judicious use of antimicrobial agent. *Pediatrics* 1998;101:174-177.
5. Gwaltney J, Sydnor A, Sande M. Etiology and treatment of acute sinusitis. *Ann Otol Rhinol Laryngol.* 1981;90:68-71.
6. Gwaltney J, Phillips C, Miller R, Riker D. Computed tomographic study of the common cold. *NEJM.* 1994;330:25-30.
7. Puhakka BT, Makela MJ, Alanen A, et al. Sinusitis in the common cold. *J Allergy Clin Immunol.* 1998;102:403-408.
8. Gwaltney JM, Hendley JO, Simon G, Jordan WS. Rhinovirus infections in an industrial population. *JAMA* 1967;202:158-164.
9. Giebink GS. Childhood sinusitis: pathophysiology, diagnosis and treatment. *Pediatr Infect Dis J* 1994;13:S55-S65.
10. Antimicrobial treatment guidelines for acute bacterial rhinosinusitis. Sinus and Allergy Health Partnership. *Otolaryngol Head Neck Surg.* 2000;123(1 Pt 2):5-31.
11. Hays GC, Mullard JE. Can nasal bacterial flora be predicted from clinical findings? *Pediatrics* 1972;49:596-599.
12. Glezen WP, Taber LH, Frank AL, et al. Influenza virus in infants. *Pediatr Infect Dis J* 1997 Nov;16(11):1065-1068.
13. Clements DA, Langdon L, Bland C, Walter E. Influenza A vaccine decreases the incidence of otitis media in 6- to 30-month old children in day care. *Arch Pediatr Adolesc Med* 1996 Jun;150(6):652-3.
14. Kyaw MH, Clarke S, Edwards GF, et al. Serotypes/groups distribution and antimicrobial resistance of invasive pneumococcal isolates: implications for vaccine strategies. *Epidemiol Infect* 2000 Dec;125(3):561-72.
15. Garbutt JM, Goldstein M, Gellman E, et al. A randomized, placebo-controlled trial of antimicrobial treatment for children with clinically diagnosed acute sinusitis. *Pediatrics* 2001;107:619-25.
16. Snow V, Mottur-Pilson C, Hickner JM. Principles of appropriate antibiotic use for acute sinusitis in adults. *Ann Intern Med.* 2001;134:495-97.
17. Hickner JM, Bartlett JG, Besser RE, et al. Principles of appropriate antibiotic use for acute rhinosinusitis in adults: background. *Ann Intern Med.* 2001;134:498-505.
18. Wald ER, Bordley WC, Darrow DH, et al. Clinical Practice Guideline: Management of Sinusitis. *Pediatrics* 2001;108:798-808.
19. Garbutt JM, Goldstein M, Gellman E, et al. A randomized, placebo-controlled trial of antimicrobial treatment for children with clinically diagnosed acute sinusitis. *Pediatrics* 2001;107(4): 619-25.

CONTACT

Art Sprenkle, MD
Washington State Medical Education & Research Foundation

CREATED WITH ASSISTANCE BY

John Watkins, RPh, MPH and Premera Blue Cross

This document is intended as a general reference. Practitioners should always independently assess each patient to evaluate whether care is indicated and what care and follow-up treatment may be appropriate under the circumstances presented. The clinical guidelines and information featured in this document are intended as an analytical framework for the evaluation and treatment of your patients. These guidelines are not intended to replace your best clinical judgement or establish a protocol for all patients. We know that there is rarely one approach in treating a patient's clinical presentation.

By using this document you agree to the following conditions: This document is provided as reference material only. You may not alter or modify this document in any manner. The most recent version of this document supersedes all prior versions. We reserve the right to modify this document without notice to you.